

**Method And Apparatus For Multi-path Data Storage And Retrieval****Abstract Of The Disclosure**

A means and method to receive and store a continuous flow of data items being processed in a data processing system in which data items are received from multiple sources simultaneously. The invention provided for simultaneous retrieval of previously stored data from multiple destinations while providing low latency of the retrieved data. The invention utilizes multi-port random access memory or register arrays with fewer ports than the number of actual data sources or data destinations within the system. The disclosure teaches a means of providing the control of data flow to multi-port simultaneous access memory systems, utilizing the control paths in the memory control systems rather than the data paths in such systems. The system eliminates or reduces the need for memory buffers to manage data flow into or out of system memory devices which have a limited number of ports or paths connecting system memory to the input and output systems of the data processing system.